Appendix F: CCR Example/ Report Content Topics

40 CFR 141.153 and 141.154 specifies the content requirements for a CCR. Every CCR must contain the following eight items:

- Information about the water system.
- Information on source(s) of water.
- Definitions: Required - MCL, MCLG;
  If applicable - TT, AL, Variances and Exemptions.
- The levels of detected contaminants.
- Information on *Cryptosporidium,* radon and other contaminants.
- Required additional health information.
- Information on violations of National Primacy Drinking Water Regulations (NPDWR).
- Information if a system is operating under a variance or exemption.

An example of a generic CCR is provided on the following pages. This sample CCR illustrates how required information on the source(s) of water, the levels of any contaminants detected in the water, compliance with other drinking water rules, and educational material can be displayed in the report. Further information on the report content topics listed below is provided on the following pages.

Town Water Quality Report - 1999

Este informe contiene información muy importante sobre su aqua beber. Tradúzcalo o hable con alguien que lo entienda bien. [translated: This report contains very important information about your drinking water. Translate it, or speak with someone who understands it well.]

Introduction

[OPTIONAL section] In compliance with the federal Safe Drinking Water Act Amendments, Town Water System is providing its customers with the first annual water quality report. This report explains where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and State standards. We are committed to providing you with information because informed customers are our best allies**. For more information about your drinking water, please contact us at 867-5309.**

Does My Drinking Water Meet EPA Standards?

[OPTIONAL section] Yes, our water meets all of EPA's standards. In 1998, we conducted more than 500 tests for over 80 contaminants that may be in drinking water. As you'll see in the table contained in this report, we detected 7 contaminants, and found only atrazine at a level higher than the State allows. As we told you in a letter at the time, our water was temporarily unsafe. For more information, see the discussion of the atrazine violation on the reverse.

What Is the Source of My Water?

[REQUIRED section: water system will explain this in its own words] Your water comes from three municipal wells drilled about 500 feet into an underground source of water called the Low Plains Aquifer. These wells are located west of town on the north side of City Park. The town owns the land immediately around these wells and restricts certain activities on that property. After the water comes out of the wells, we treat it to remove several contaminants and we add disinfectant to protect you against microbial contaminants. The State will be performing an assessment of our source water which will be completed by January of 2001. We will report the results to you and tell you how to get a copy of the report when it is available.

How Can I Get Involved?

[REQUIRED section: water system will write this] Our Water Board meets on the first Tuesday of each month at 7:30 pm in the Town Hall. Please feel free to participate in these meetings.

Do I Need to Take Special Precautions?

[REQUIRED section: Mandatory Language]

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA and the Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Why Are There Contaminants in My Water?

[REQUIRED section: Mandatory Language]

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

[water system can use the EPA language provided below or write comparable language]

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and , in some cases, radioactive material, and can pick up

substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water before we treat it include:

- *Microbial contaminants,* such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- *Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- *Radioactive contaminants*, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Is Our Water System Meeting Other Rules That Govern Our Operations?

[OPTIONAL section: water system will write this language] The State and EPA require us to test our water on a regular basis to ensure its safety. In February and May of this year, we took the samples at the required time but failed to submit the results of this monitoring to the State in a timely manner. We are reviewing our procedures to ensure that this paperwork will be submitted in a timely manner in the future.

Other Information

[OPTIONAL section: water system will write this language] Our water system is currently working with the community to increase awareness of proper waste disposal practices, to further protect the source of our drinking water. We are also working with other agencies and local watershed groups to educate the community on ways to keep the water safe.

Water Quality Data Table

[REQUIRED section: All reports must have a table for detected contaminants and an explanation of the definitions used in the table] The water quality data table on the next page lists all the contaminants that were detected during monitoring for the 1998 calendar year. The presence of these contaminants in the water, does not necessarily indicate that the water poses a health risk. Definitions of the terms and abbreviations used in the table are given below:

Definitions

- *MCL:* Maximum Contaminant Level, or the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology
- *MCLG:* Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- *AL:* Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- *n/a:* Not applicable.
- *nd:* Not detectable at testing limit.
- *ppb:* Parts per billion or micrograms per liter.
- *ppm:* Parts per million or milligrams per liter.
- *pCi/l:* Picocuries per liter, a measure of radioactivity.

W A T E R Q U A L I T Y D A T A

[THIS TABLE IS REQUIRED ON ALL REPORTS]

Unless otherwise noted, the data presented in the water quality data table is from testing done between January 1- December 31, 1998. The State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Contaminant (units)	MCL	MCLG	Town Water Level Found	Range of Detections	Sample Date	Violation	Typical Source of Contaminant
Inorganic Contaminants							
Fluoride (ppm)[1]	2	4	0.98	n/a			Water additive which promotes strong teeth.
Lead (ppb)	AL=15	0	0.205	Out of 20 sites sampled, only 1 site was found above the AL			Corrosion of household plumbing systems.
Nitrate as nitrogen (ppm)[2]	10	10	6	nd-9			Runoff from fertilizer use.
Organic Contaminants							
Atrazine (ppb)[3]	3	3	4.275	0.1-10		***YES***	Runoff from herbicide used on row crops.
Total Trihalomethanes (TTHMs) (ppb)	100	n/a	73	40-135			Byproduct of drinking water chlorination.
Unregulated Contaminants							
Chloromethane (ppm)	Not Regulated - There is no MCL or MCLG for this contaminant		0.07		May 1995		EPA and State regulations require us to monitor for this contaminant while EPA reconsiders its MCL.
Radionuclides							
Beta/photon emitters (pCi/L)[4]	50	0	10				Erosion of natural deposits.

About the Data:

1. EPA's MCL and MCLG for Fluoride is 4 ppm. However, our State has set a lower MCL of 2 ppm to better protect human health.

2. **About Nitrate:**

   Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

3. **Atrazine Violation**:

   During March, April, and May, a large surge in the use of atrazine-based herbicides by area farmers caused our water to exceed the MCL for atrazine. We sent a notice warning you of this problem when it occurred. We are working with the State and local farmers to ensure that this does not happen again, and we are monitoring atrazine levels monthly. We regret exposing you to any potential risk. You should know that some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties. If you want more information about atrazine or the violation, please call us at 867-5309, or Sample County's Health Department (423-4444), or the State drinking water office (853-323-3333).

4. The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles.

Appendix F: Report Content Topics

General Information

The CCR rule does not specify a title for the report. A CWS may call the report a "consumer confidence report," a "water quality report," or use another title altogether.

The provisions in the rule set the baseline for the reports. EPA encourages all systems to enhance or adjust the content of their reports to suit local conditions. If systems think that an added picture or graph would help customers understand the information systems are providing, then EPA encourages the addition of the information. Remember that any additional information must be consistent with, and not detract from, the purpose of the report.

Customers are most interested in a clear statement of whether or not their drinking water system meets all relevant EPA and State standards. Although it is not mandated by the CCR regulations, EPA believes that one of the most useful things systems can do is to begin the report by explaining the steps taken to protect the drinking water and telling customers whether the water complied with all drinking water standards.

Systems should be cautious about making unqualified assertions about the safety of its water. Blanket statements such as "your tap water is safe" may be true for many people drinking the water, but not for members of vulnerable populations such as infants, people undergoing chemotherapy, or people with HIV/AIDS. Therefore, EPA suggests that systems be cautious in using the word "safe" and make sure that the required warning statements for vulnerable populations are clearly highlighted in the report.

Example of such a statement:

> *Last year, as in years past, your tap water met all EPA and State drinking water standards. Town Water System vigilantly safeguards its mountain water supplies and once again we are able to report that the department has never had a violation of a contaminant level or of any other water quality standard. This brochure is a snapshot of the quality of the water we provided last year. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with this information because informed customers are our best allies.*

Request for CCR Recipients to Share Information with Non-Bill Paying Consumers

As part of a "good faith" effort, EPA recommends that a note be included in the CCR, or with the CCR as it is distributed, asking recipients to share information with non-bill paying consumers. A sample note may read as follows:

> *Town Water System has included additional copies of our Consumer Confidence Report in this mailing. Town Water System would appreciate it if large volume water customers such as yourself post extra copies of these reports in conspicuous locations or distribute them to your tenants, residents, patients, students, and/or employees. This action will allow individuals who consume the water Town Water System delivers, but are not billed as customers, to learn about our water system.*

Wholesalers/Retailers

Drinking water wholesalers must provide retailers with monitoring and other information in enough time so that a retailer can produce a CCR (See discussion in implementation guidance Section I, A: Key Dates of the Rule).

Wholesalers are not responsible for creating the report for the retailer, nor are they responsible for providing data on contaminants the retailer monitors.

In some cases, a retailer will contract with the wholesaler to produce the report, since the wholesaler may have more staff and resources available. Under those circumstances it would be acceptable for:

1. The retailer to send out the wholesaler's CCR with a cover letter explaining their relationship, if the retailer had no new data to add.

2. The retailer to reprint the wholesaler's CCR with a new title/letterhead and any additional data the retailer had.

Retailers are responsible for ensuring that their customers receive a CCR containing all the required content elements, regardless of who prepares the report.

Source(s) of Water

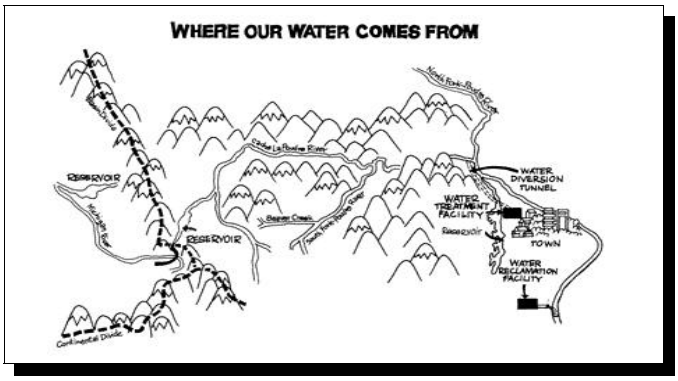
Describe:

- The type of water (ground water, surface water, or a blend).
- The commonly-used name(s) (if such a name exists).
- Locations of your water source(s).

If a source water assessment has been completed, information on the availability of the assessment and means to obtain a copy must be included in the CCR. Also, a brief summary of the source water's susceptibility to contamination based on the findings of the source water assessment should be included.

Example: Surface water source; source water assessment not available

> *Your water comes from the Grubstake and Spitfire rivers in the mountains west of town. We collect water in the McErtel Reservoir (Please see the map) and then pipe it to the treatment plant just northwest of town. Access to the reservoir is restricted to protect our water from contamination. We are working with the State drinking water program to identify what other kinds of pollution our water supply could be vulnerable to. The State will be performing an assessment of our source water which will be completed by 2001. We will report the results to you and tell you how to get a copy of the report when it is available.*



Example: Surface water source; source water assessment available

> *Your water comes from the Grubstake and Spitfire Rivers. We collect it in the McErtel Reservoir and then pipe it to the treatment plant just northwest of town. The State drinking water program has found that our drinking water is potentially most susceptible to farm runoff and three underground storage tanks in Spitfire county. However, we have not detected any contaminants from these sources in our drinking water. You can get a copy of the source water assessment by contacting us at 867-5309.*

Appendix I contains more information on source water assessments and how this information can be incorporated into the CCR.

Interconnections/Back-up Sources

Explaining a system's interconnections and back-up sources may be difficult, but it is important to remember that consumers need to understand that the source of their water may vary during the year. If a system uses water from these sources, it should include the monitoring data in the table of detection data. Like many pieces of information in the report, deciding whether to explain that the well a system uses only a few days a year is a judgement call a system should make in consultation with the State.

Non-English Speaking Notice

CWSs that have a large proportion of non-English speaking customers, as determined by the primacy agency, must include information in the appropriate language(s) regarding:

– The importance of the report; **or**

– A telephone number or address where such residents may contact the system to obtain a translated copy of the report or assistance in the appropriate language.

- The primacy agency may allow CWSs, after consultation with the agency, to determine whether they serve communities with a large proportion of non-English speaking residents.

- Often, schools and universities have teachers or students who can provide low-cost translations. A sample statement is given below with the corresponding translations.

This report contains very important information about your drinking water. Translate it, or speak with someone who understands it well.

Spanish version: **Este informe contiene información muy importante sobre su aqua beber.**

Tradúzcalo o hable con alguien que lo entienda bien.

French version: **Ce rapport contient des informations importantes sur votre eau potable.**

Traduisez-le ou parlez en avec quequ'un qui le comprend bien.

Chinese version: 這份報告含有非常重要有関您喝的水的资料，请找懂得這份報告的人翻譯或解釋给您聽。

Korean version:

아래의 보고는 귀하께서 드시는 식수에 대한 중요한 정보가 포함되어 있습니다. 번역을 하시든지 아니면 이 보고를 읽고 이해하시는 분과 말씀하시기를 바랍니다.

Reporting the Levels of Detected Contaminants

A detected contaminant is any contaminant detected at or above its minimum detection limit. Appendix G contains a list of EPA's minimum detection limits for the following contaminants specified in the rule:

- 40 CFR 141.23(a)(4) for inorganic contaminants.
- 40 CFR 141.24(f)(7) for organic contaminants listed in 40 CFR 141.61(a).
- 40 CFR 141.24(h)(18) for organic contaminants listed in 40 CFR 141.61(c).
- 40 CFR 141.25(c) for radionuclides.

To ensure that members of the public can easily compare detected contaminant levels with their corresponding MCLs, the table(s) must display:

– The MCL in units that express it as a number $\geq$ 1.

– The MCLG and the detected contaminant level in the same units as the MCL.

Note: These values do not have to be expressed as a number $\geq$ 1. Appendix H of this guidance shows how to convert MCLs and monitoring data for the CCR.

The main table must contain **only** data for regulated contaminants (i.e contaminants subject to a MCL, TT, or AL), and unregulated contaminants for which EPA or the State requires monitoring under 40 CFR 141.40 or the Information Collection Rule (ICR), 40 CFR 141.142-143.

Contaminants that are not detected or are detected below the minimum detection level should not be included in the detected contaminants table. If a system wishes to highlight the fact that it tests for, and does not find a number of other contaminants, EPA recommends placing this information outside of the table. For example a footnote to the table may read as follows:

EPA requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table above are the only contaminants detected in your drinking water.

A system has the option of making several tables, so that the regulated contaminants are separate from those that do not have MCLs, like the ICR contaminants. Further, a system may wish to organize the table(s) by contaminant type (e.g., microbial, inorganic) or sampling site (e.g., treatment plant, distribution system).

No data older than five years need be included in the first or subsequent reports.

Only the results of ICR finished water monitoring should be included in the table. Those results should only be reported for 5 years from the date of the last sample or until the detected contaminant becomes regulated and subject to regular monitoring requirements, whichever comes first.

Any additional, voluntarily-collected monitoring data which a CWS chooses to include in the CCR must be reported in another section of the report, clearly separated from the regulated contaminant data.

Interpreting Monitoring Data

Below are examples of how systems determine the highest compliance value and the range of detected levels to present for contaminants under the following monitoring scenarios:

1). Compliance with the MCL is determined annually or less frequently.

★ 1 sampling site/1sampling date.

March 1998 - 0.003
REPORT IN TABLE: Highest Detected Level = 0.003. Report no range

.

★ Multiple sampling sites/1 sampling date.

Barium	Feb 1998
well #1	0.60
well #2	0.46
well #3	nd
REPORT IN TABLE: Highest Level = 0.60 AND Range = nd - 0.60	

2). Compliance with MCL determined by a running annual average of all samples taken from a sampling point.

★ 1 sampling site/multiple sampling dates.

Atrazine	1st quarter 1998	2nd quarter 1998	3rd quarter 1998	4th quarter 1998
well #1	0.8	3.8	2.1	0.9
REPORT IN TABLE: Average = 1.9 AND Range = 0.8 - 3.8				

3). Compliance with MCL determined by a running annual average of all samples at all sampling points – TTHMs example.

★ Multiple sampling sites/multiple sampling dates.

TTHMs	2nd quarter 1997	3rd quarter 1997	4th quarter 1997	1st quarter 1998	2nd quarter 1998	3rd quarter 1998	4th quarter 1998
site #1	-	-	-	45	60	125	70
site #2	-	-	-	40	55	115	60
site #3	-	-	-	45	60	105	70
site #4	-	-	-	50	65	135	80
Quarterly Average	55	125	65	45	60	120	70
Running Annual Average	-	-	-	73	74	73	74
REPORT IN TABLE: Highest Annual Average = 74 AND Range = 40 -135							

Note: The last 3 quarters of 1997 are shown because they are needed to compute the running annual average. The reported range would include only detection data from 1998, unless one of the values from the previous year was so extraordinary that consumers would need it to understand the reported annual average.

As discussed in Section I, B.1: Item 6 of the implementation guidance, if any of the above values for the running annual average were above 80 (the revised MCL for TTHMs, effective in 2001) the report would need to include health effects language for TTHMs, even though the system was not actually in violation yet.

4). Lead and Copper

★ If a system detects either lead or copper, the CCR must include the 90th percentile value from the most recent sampling and the number of sampling sites exceeding the action level.

	site 1	site 2	site 3	site 4	site 5	site 6	site 7	site 8	site 9	site 10
July 1998	nd	nd	8	12	19	3	nd	nd	4	22
REPORT IN TABLE: 90th percentile = 19 AND Number of Sites above AL (15) = 2										

Parametric data a system collects in association with this rule should not be included in the report.

★ Educational Statement for Lead

If lead is detected above the action level in more than 5 percent, and up to and including 10 percent of homes sampled, the following statement about the impact of lead on children must be included in the CCR:

> *Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).*

If lead is detected under the circumstances described above

- Systems that take **20 or more** samples must include the educational statement.
- Systems that collect **fewer than 20** samples do not have to include the educational statement.

★ **Health Effects Language for Lead and Copper**

Explanations of action level exceedances or violations of Subpart I [40 CFR 141.80 - 141.84] must include potential health effects language from Appendix C to Subpart O of the regulation. A copy of that appendix is provided in Appendix H of this guidance.

Lead:

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning disabilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Copper:

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

5). Turbidity

★ When reporting data pursuant to 40 CFR 141.73 - turbidity as a TT/indicator of filtration performance, the highest single measurement and the lowest monthly percentage of samples meeting the requirements specified for the relevant filtration technology must be included in the report. A system may wish to present the data as follows:

Contaminant	MCL	MCLG	Level Found	Range of Detections	Violation	Date of Sample	Typical Source of Contaminant
Turbidity	TT = 5 NTU	n/a	1	-	no	-	Soil runoff
	TT=percentage of samples <0.5 NTU		96%	-			

As discussed in Section I, B.1: Item 4 of the implementation guidance, reporting turbidity based upon the revised requirements in 40 CFR 141.173 is not required until the CCR due in 2003.

As part of an explanation for measuring turbidity, systems may wish explain that turbidity is a measure of treatment performance and is regulated as a treatment technique.

6). Beta Particles

★ The MCL for beta particles is 4 mrem/year. EPA recognizes that labs often report these results in pCi/l, and that there is no simple conversion between the two units. Therefore, it is acceptable for systems to report the detected level for beta particles in pCi/l. So that consumers may have a standard against which to compare the detected level, systems should place 50 in the MCL column and include a footnote explaining that EPA considers 50 pCi/l to be a level of concern for beta particles.

Contaminant	MCL	MCLG	Level Found	Range of Detections	Violation	Date of Sample	Typical Source of Contaminant
Beta particles (pCi/l)	50*	0	10	nd-10			Decay of natural and man-made deposits

Note: The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles.

Systems that detect beta particles at or above 50 pCi/l must determine the actual radioactive constituents present in the water to calculate the dose exposure level in mrem/yr, and must report both the detected level and the MCL as mrem/yr.

Monitoring Waivers

Systems that have monitoring waivers, or for another reason monitor less often than once per year, must include information on contaminants detected in the most recent testing period. The report must also contain a brief explanation that the data for those contaminants is from the most recent testing done.

If sampling was not performed for a given parameter in the calendar year covered by the report, then data going back a maximum of five years must be used.

As shown in the CCR example, for ease of presentation a column for the date of the last sample can be included in the table with the corresponding explanation outside of the table.

Contaminant	MCL	MCLG	Level Found	Range of Detections	Violation	Date of Sample	Typical Source of Contaminant
Cyanide (ppb)	200	200	10			Feb '97	Discharge from steel/metal industry; discharge from fertilizer and plastic factories
Selenium (ppb)	50	50	1			Feb '97	Discharge from petroleum and metal refineries

Most of the data presented in this table is from testing done between January 1 - December 31 1998. We monitor for some contaminants less than once per year, because the concentrations for those contaminants are not expected to vary significantly from year to year. As a result, some of our data though representative is more than a year old. For those contaminants, the date of the last sample is shown in the table.

MCLs

- The table(s) must contain the MCL for detected contaminants expressed as a number equal to or greater than 1.

- For any contaminant detected in violation of an MCL, a TT, or exceeding an action level, the table(s) must contain a clear indication of the violation or exceedance.

Generally, the State and federal MCLs are the same for most contaminants. In cases where a State MCL may be more stringent than the Federal standard, EPA recommends that the system indicate this in the report. Several ways to accomplish this include:

Including the MCL in the table and highlighting the MCL through a different font or asterisk and explaining in a footnote that the State MCL is stricter than the federal standard. (as shown in the sample CCR).

Placing both a federal and State MCL column in the table.

Contaminant	Federal Standard		State MCL	Level Found	Range of Detections	Violation	Date of Sample	Typical Source of Contaminant
	MCL	MCLG						
Barium (ppb)	2	2	1	1	0.03-1			Discharge from drilling wastes and metal refineries

A system may also wish to highlight the case where there is no federal standard and the State has developed its own standard, using similar techniques.

Multiple Hydraulically Independent Distribution Systems

If the system distributes water to its customers from multiple hydraulically independent distribution systems fed from ***different*** raw water sources, include in the table(s), separate columns for detection data for each service area. Also include a description of the area served by each distribution system.

If a system's water is blended, co-mingled, or otherwise combined in any way within the distribution system, regardless of the number of sources or treatment plants, there is no need for them to have multiple columns of contaminant data. CWS must have more than one column in their CCR only if they put the water into **physically distinct distribution systems**. Under this rule, CWS are required to provide ranges of contaminant detection to account for water from different sources and of different quality.

Cryptosporidium

If the system has performed monitoring indicating the presence of *Cryptosporidium* in its source water or its finished water, the CCR must contain a summary of the monitoring results and an explanation of the significance of those results. CWS may choose to include the actual analytical results as part of the summary.

Information on *Cryptosporidium* **should not be placed** in the detected contaminants table. Rather, the information should be placed outside of the table, elsewhere in the report. A sample monitoring results summary may read as follows:

> *We are required to test our sources of drinking water, as well as our treated tap water, for the presence of* Cryptosporidium *We test for this contaminant quarterly in both source water and treated water. Although small amounts were found in the source water, we did not find any in the treated water that goes to your tap.* Cryptosporidium *is a microbial parasite which is found in surface water throughout the U.S. Although* Cryptosporidium *can be removed by filtration, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring of source water and/or finished water indicates the presence of these organisms. Unfortunately, current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of an infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks. However, immuno-compromised people have more difficulty and are at greater risk of developing severe, life-threatening illness. Immuno-*

compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. Cryptosporidium *must be ingested for it to cause disease, and it may be spread through means other than drinking water.*

A system does have the option as to whether they wish to report analytical results as part of this summary.

If the system monitored for *Cryptosporidium* and did not detect it, the system does not have to discuss the monitoring results in the CCR. However, a system does have the option to mention that *Cryptosporidium* was tested for and not detected. A sample statement could read as follows:

We are required to test our sources of drinking water, as well as our treated tap water, for the presence of Cryptosporidium. Cryptosporidium *is a microbial parasite which is found in surface water throughout the U.S. When ingested,* Cryptosporidium *can cause gastrointestinal distress for otherwise healthy people and more serious illness or death for people with weak immune systems. We did not find any* Cryptosporidium *in our source (untreated) water or finished (treated) water. Therefore, we don't believe that you need to worry about these results. We have a modern and effective filtration plant, and filtration is the single best protection against* Cryptosporidium.

Radon

If the system has performed monitoring indicating the presence of radon in its finished water, the CCR must contain the monitoring results and an explanation of the significance of those results.

Radon is a radioactive gas that you cannot see, taste, or smell. It is throughout the United States and can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/l) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your State radon program or call EPA's Radon Hotline (800-SOS-RADON).

If the system monitored for radon and did not detect it, the system does not have to present or discuss the monitoring results in the CCR.

Other Contaminants

If the system has performed any additional voluntary monitoring that indicates the presence of other non-regulated contaminants in the finished water, EPA **strongly** recommends but does not require the system to report any results that might indicate a health concern. EPA considers any detects above a proposed MCL or health advisory level to indicate possible health concerns. The Safe Drinking Water Hotline (800-426-4791) and the EPA website http://www.epa.gov/safewater/hfacts.html are resources for this information.

If a system chooses to include this information on these non-regulated contaminants, the report should include the results of monitoring, and an explanation of the significance of the results noting the existence of a human health advisory or proposed regulation.

NPDWR Violations

The CCR must include a clear and readily understandable explanation of any NPDWR violation during the reporting period, as well as any potential adverse health effects and the steps the CWS has taken to correct the violation.

Potential Health Effects Language

Of the seven NPDWR violations identified in the rule, EPA is prescribing mandatory health effects language for only three violations:

1). Filtration and disinfection prescribed by Subpart H.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

2). Lead and copper control requirements.

Lead: *Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning disabilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.*

Copper: *Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.*

3). Treatment techniques for acrylamide and epichlorohydrin.

Acrylamide: *Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.*

Epichlorohydrin: *Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.*

For the remaining violations, a system may use language from Appendix C to Subpart O of the regulation, or design language that is tailored to that specific violation.

Monitoring and Reporting (M&R) Violations

Some contaminants are monitored for daily, others need to be checked far less frequently (every nine years is the longest monitoring cycle). For instance, at a minimum, drinking water systems will monitor every four hours for turbidity, monthly for bacteria, and once every four years for radionuclides. A M&R violation means that the system did not perform the required testing, take adequate samples, or report a violation as required. Most of the violations experienced by CWSs are for failure to monitor the drinking water and report the results.

As shown in the CCR example, a column for violations can be placed in the detected contaminants table and further explanation of the violation presented outside of the table. EPA recommends that M&R violations be described outside of the detected contaminants table. In that explanation the system can indicate that while monitoring and reporting violations do not necessarily indicate a health risk, if a system fails to monitor it may not be aware of the potential health risk posed by a contaminant which may be present, but undetected.

If a system has multiple monitoring violations, it may be simpler and shorter to list them in a separate table followed by a short explanation. The table could include columns for monitoring periods, number of samples required during the period, number of samples actually taken and whether samples were taken during the following monitoring period. However, all monitoring violations are not the same and in some instances, the CWS may believe it is more appropriate to describe each violation in a short paragraph. For example, a coliform violation in which one of 100 samples was missed is less serious than missing one of two required samples.

Multiple monitoring violations listed in a table:

> *We failed to complete required sampling in a timely manner. Because we did not take the required number of samples, we did not know whether the contaminants were present in your drinking water, and we are unable to tell you whether you health was at risk during that time. The contaminants for which monitoring was not done are listed in the table below, with the period during which samples should have been taken, the number of samples each contaminant required, the number taken, and when required sampling will resume.*

Contaminant	Monitoring Period	Number of Samples Required	Number of Samples Taken	Date Sampling Will Resume
VOCs[1]	1/96-12/98	1	0	2/99
Total Coliform Bacteria	10/1/98-10/31/98	100	93	11/98

[1] VOCs also known as organic compounds, are tested by collecting one sample and testing that sample for all VOCs. VOCs include benzene, carbon tetrachloride, chlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, cis-dichloroethylene, trans-dichloroethylene, dichloromethane, 1,2-dichloropropane, ethylbenzene, styrene, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, toluene, 1,2,4-trichlorobenzene, 1,1-dichloroethylene, 1,1,2-trichloroethane, vinyl chloride, and xylene.

Although monitoring may be done by group as opposed to each contaminant, each contaminant should be listed for not monitoring because each is a violation. For the example above, a footnote was added to list all of the VOC's.

Regardless of whether the violation information is presented in tabular or paragraph form or a combination thereof, an explanation of the potential health effects and steps to correct the violation must also be included. If a system failed to take the sample on time, the report should say "health effects unknown." If the system took the samples accurately and on-time, but mailed the results late, the system does not need to discuss health effects.

Recordkeeping of Compliance Data

Sample statement may read as follows:

> *Due to administrative oversight during a busy part of the year, our office failed to submit a report required under NPDWR. This violation has no impact on the quality of the water our customers received and it posed no risk to public health. We have established a report tracking file to ensure that all reporting requirements are met in the future.*

Special Monitoring

Sample statement may read as follows:

> *Last year the State issued an order requiring our system to monitor for contaminant X four times per year instead of annually. We missed the first quarterly monitoring and reporting date, but since then we have been in compliance. We do not believe that the missed testing and reporting has any adverse effect upon public health. Our system will strive to meet all future requirements.*

Variances and Exemptions

If a system is operating under a variance or exemption during the period covered by the report, the CCR must include a section that explains the reasons why the variance or exemption was granted, the dates issued, renewal date, steps the system is taking to comply with the terms and schedules for the variance or exemption and a notice of public opportunity to review the variance or exemption.

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Appendix G: List of EPA's Minimum Detection Limits

Under the CCR rule, a detected contaminant is any contaminant detected at or above the detection limits prescribed by:

- 40 CFR 141.23(a)(4) for inorganic contaminants.
- 40 CFR 141.24(f)(7) for organic contaminants listed in 40 CFR 141.61(a).
- 40 CFR 141.24(h)(18) for organic contaminants listed in 40 CFR 141.61(c).
- 40 CFR 141.25(c) for radionuclides.

In an effort to make this guidance document as useful as possible, the EPA's minimum detection limits (MDLs) for all of the contaminants specified above are presented here. Most Primacy States have their own regulations specifying MDLs for these contaminants which may be more stringent and take precedence over EPA values.

The detection levels for some contaminants, such as lead and copper, and many of the disinfection byproducts are not included in the CFR sections cited above and are thus not included in the detection limits table on the following page. If a contaminant is not listed in the detection limits table and a system's laboratory analysis provides a detected value for that contaminant, the system must report the contaminant in the CCR. Contaminants that are not detected, or are detected below the MDL should not be included in the CCR detected contaminants table.

Table G-1: EPA's Minimum Detection Limits			
Contaminant	**MCL (mg/l)**	**Methodology**	**Detection Limit (mg/l)**
Inorganic Contaminants [40 CFR 141.23(a)(4)]			
Antimony	0.006	Atomic Absorption; Furnace Atomic Absorption; Platform ICP-Mass Spectrometry Hydride-Atomic Absorption	0.0003 0.0008[5] 0.0004 0.001
Asbestos	7 MFL[1]	Transmission Electron Microscopy	0.01 MFL[1]
Barium	2	Atomic Absorption; furnace technique Atomic Absorption; direct aspiration Inductively Coupled Plasma	0.002 0.1 0.002 (0.001)
Beryllium	0.004	Atomic Absorption; Furnace Atomic Absorption; Platform Inductively Coupled Plasma [2] ICP-Mass Spectrometry	0.0002 0.00002[5] 0.0003 0.0003
Cadmium	0.005	Atomic Absorption ; furnace technique Inductively Coupled Plasma	0.0001 0.001
Chromium	0.1	Atomic Absorption; furnace technique Inductively Coupled Plasma	0.001 0.007 (0.001)
Cyanide	0.2	Distillation, Spectrophotometric Distillation, Automated, Spectrophotometric Distillation, Selective Electrode Distillation, Amenable, Spectrophotometric	0.02 0.005 0.05 0.02
Mercury	0.002	Manual Cold Vapor Technique Automated Cold Vapor Technique	0.0002 0.0002
Nickel	0.1	Atomic Absorption; Furnace Atomic Absorption; Platform Inductively Coupled Plasma [2] ICP-Mass Spectrometry	0.001 0.0006[5] 0.005 0.0005
Nitrate	10	Manual Cadmium Reduction Automated Hydrazine Reduction Automated Cadmium Reduction Ion Selective Electrode Ion Chromatography	0.01 0.01 0.05 1 0.01
Nitrite	1	Spectrophotometric Automated Cadmium Reduction Manual Cadmium Reduction Ion Chromatography	0.01 0.05 0.01 0.004

Table G-1: EPA's Minimum Detection Limits			
Contaminant	**MCL (mg/l)**	**Methodology**	**Detection Limit (mg/l)**
Selenium	0.05	Atomic Absorption; furnace Atomic Absorption; gaseous hydride	0.002 0.002
Thallium	0.002	Atomic Absorption; Furnace Atomic Absorption; Platform ICP-Mass Spectrometry	0.001 0.0007[5] 0.0003
Organic Contaminants [40 CFR 141.24(f)(7)]			
Vinyl chloride	0.002	502.2; 524.2	0.0005
Benzene	0.005	502.2; 524.2	0.0005
Carbon tetrachloride	0.005	502.2; 524.2; 551	0.0005
1,2-Dichloroethane	0.005	502.0; 524.2	0.0005
Trichloroethylene	0.005	502.2; 524.2; 551	0.0005
para-Dichlorobenzene	0.075	502.0; 524.2	0.0005
1,1-Dichloroethylene	0.007	502.2; 524.2	0.0005
1,1,1-Trichloroethane	0.2	502.2; 524.2	0.0005
cis-1,2-Dichloroethylene	0.07	502.2; 524.2	0.0005
1,2-Dichloropropane	0.005	502.2; 524.2	0.0005
Ethylbenzene	0.7	502.2; 524.2	0.0005
Monochlorobenzene	0.1	502.2; 524.2	0.0005
o-Dichlorobenzene	0.6	502.2; 524.2	0.0005
Styrene	0.1	502.2; 524.2	0.0005
Tetrachloroethylene	0.005	502.2; 524.2; 551	0.0005
Toluene	1	502.2; 524.2	0.0005
trans-1,2-Dichloroethylene	0.1	502.2; 524.2	0.0005
Xylenes (total)	10	502.2; 524.2	0.0005
Dichloromethane	0.005	502.2; 524.2	0.0005
1,2,4-Trichlorobenzene	0.07	502.2; 524.2	0.0005
1,1,2-Trichloroethane	0.005	502.2; 524.2	0.0005

Table G-1: EPA's Minimum Detection Limits			
Contaminant	**MCL (mg/l)**	**Methodology**	**Detection Limit (mg/l)**
Synthetic Organic Contaminants including Pesticides and Herbicides [40 CFR141.24 (h)(18)]			
Alachlor	0.002	505[7]; 507; 525.2; 508.1	0.0002
Aldicarb	0.003	531.1; 6610	0.0005
Aldicarb sulfoxide	0.004	531.1; 6610	0.0005
Aldicarb sulfone	0.002	531.1; 6610	0.0008
Atrazine	0.003	505[7]; 507; 525.2; 508.1	0.0001
Benzo(a)pyrene	0.0002	525.2; 550; 550.1	0.00002
Carbofuran	0.04	531.1; 6610	0.0009
Chlordane	0.002	505; 508; 525.2; 508.1	0.0002
Dalapon	0.2	552.1; 515.1	0.001
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	504.1; 551	0.00002
Di(2-ethylhexyl)adipate	0.4	506; 525.2	0.0006
Di(2-ethylhexyl) phthalate	0.006	506; 525.2	0.0006
Dinoseb	0.007	515.2; 555; 515.1	0.0002
Diquat	0.02	549.1	0.0004
2,4-D	0.07	515.2; 555; 515.1	0.0001
Endothall	0.1	548.1	0.009
Endrin	0.002	505; 508; 525.2; 508.1	0.00001
Ethylene dibromide	0.00005	504.1; 551	0.00001
Glyphosate	0.7	547; 6651	0.006
Heptachlor	0.0004	505; 508; 525.2; 508.1	0.00004
Heptachlor epoxide	0.0002	505; 508; 525.2; 508.1	0.00002
Hexachlorobenzene	0.001	505; 508; 525.2; 508.1	0.0001
Hexachlorocyclopentadiene	0.05	505; 525.2; 508; 508.1	0.0001
Lindane	0.0002	505; 508; 525.2; 508.1	0.00002
Methoxychlor	0.04	505; 508; 525.2; 508.1	0.0001
Oxamyl	0.2	531.1; 6610	0.002

Table G-1: EPA's Minimum Detection Limits			
Contaminant	**MCL (mg/l)**	**Methodology**	**Detection Limit (mg/l)**
Picloram	0.5	515.2; 555; 515.1	0.0001
Polychlorinated biphenyls (PCBs)[8] (as decachlorophenyl)	0.0005	508A	0.0001
Pentachlorophenol	0.001	515.2; 525.2; 555; 515.1	0.00004
Simazine	0.004	505[7]; 507; 525.2; 508.1	0.00007
Toxaphene	0.003	505; 508; 525.2	0.001
2,3,7,8-TCDD (Dioxin)	$3x10^{-8}$	1613	5.00e-09
2,4,5-TP (Silvex)	0.05	515.2; 555; 515.1	0.0002
Radioactive Contaminants [40 CFR141.25]			
Tritium	--	Liquid Scintillation	1,000 pCi/l
Stontium-90	--	Radio-chemical	2 pCi/l
Strontium-89	--	Radio-chemical	10 pCi/l
Iodine-131	--	Radio-chemical	1 pCi/l
Cesium-134	--	Radio-chemical; gamma ray spectrometry	10 pCi/l
Gross beta	--	Evaporation	4 pCi/l
Other radionuclides	--		1/10 of the applicable limit

Footnotes:

1 MFL = million fibers per liter > 10 m

2 Using a 2X preconcentration step as noted in Method 200.7. Lower MDLs may be achieved when using a 4X preconcentration.

3 Screening method for total cyanides

4 Measures "free cyanides"

5 Lower MDLs are reported using stabilized temperature graphite furnace atomic absorption

6. pCi/l = picocuries per liter, a measure of radioactivity

7. A nitrogen-phosphorus detector should be substituted for the electron capture detector in Method 505 (or another approved method should be used) to determine alachlor, atrazine, and simazine, if lower detection limits are required.

8. PCBs are qualitatively identified as Aroclors and measured for compliance purposes as decachlorobiphenyl.

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Appendix H: Appendices from Subpart O of 40 CFR 141

In an effort to make this guidance document as useful as possible, all of the appendices to the CCR regulation are presented here.

Table H-1 contains information from Appendix A to Subpart O - Converting MCL Compliance Values for CCRs. The CCR rule requires the MCL to be reported as a number equal to or greater than 1. The associated MCLG and detected contaminant level must be reported in the same units as the MCL. Table H-2 contains the following information on regulated contaminants from Appendices B and C to Subpart O of the regulation: MCL; MCLG; major sources in drinking water; and health effects language. The regulation also requires that information on unregulated contaminant monitoring required under 40 CFR 141.40 and ICR monitoring required under 40 CFR 141.142-143 be included in the CCR. Table H-3 provides a list of the unregulated and ICR contaminants.

Table H-1: Converting MCL Compliance Values for CCRs (Appendix A to Subpart O of the CCR Rule)

Key

AL=Action Level
MCL=Maximum Contaminant Level
MCLG=Maximum Contaminant Level Goal
MFL=million fibers per liter
mrem/year=millirems per year (a measure of radiation absorbed by the body)
NTU=Nephelometric Turbidity Units
pCi/l=picocuries per liter (a measure of radioactivity)
ppm=parts per million, or milligrams per liter (mg/l)
ppb=parts per billion, or micrograms per liter (g/l)
ppt=parts per trillion, or nanograms per liter
ppq=parts per quadrillion, or picograms per liter
TT=Treatment Technique

Table H-1: Converting MCL Compliance Values for CCRs				
Contaminant	**MCL in compliance units (mg/l)**	**multiply by...**	**MCL in CCR units**	**MCLG in CCR units**
Microbiological Contaminants				
1. Total Coliform Bacteria	-	-	For systems that collect 40 or more samples: 5% of monthly samples are positive For systems that collect fewer than 40 samples per month: 1 positive monthly sample	0
2. Fecal coliform and *E. coli*	-	-	a routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or *E. coli* positive	0
3. Turbidity	-	-	TT (NTU)	n/a
Radioactive Contaminants				
4. Beta/photon emitters	4 mrem/yr	-	4 mrem/yr	0
5. Alpha emitters	15 pCi/l	-	15 pCi/l	0
6. Combined radium	5 pCi/l	-	5 pCi/l	0

Table H-1: Converting MCL Compliance Values for CCRs				
Contaminant	**MCL in compliance units (mg/l)**	**multiply by...**	**MCL in CCR units**	**MCLG in CCR units**
Inorganic Contaminants				
7. Antimony	0.006	1000	6 ppb	6
8. Arsenic	0.05	1000	50 ppb	n/a
9. Asbestos	7 MFL	-	7 MFL	7
10. Barium	2	-	2 ppm	2
11. Beryllium	0.004	1000	4 ppb	4
12. Cadmium	0.005	1000	5 ppb	5
13. Chromium	0.1	1000	100 ppb	100
14. Copper	AL=1.3	-	AL=1.3 ppm	1.3
15. Cyanide	0.2	1000	200 ppb	200
16. Fluoride	4	-	4 ppm	4
17. Lead	AL=.015	1000	AL=15 ppb	0
18. Mercury	0.002	1000	2 ppb	2
19. Nitrate (as Nitrogen)	10	-	10 ppm	10
20. Nitrite (as Nitrogen)	1	-	1 ppm	1
21. Selenium	0.05	1000	50 ppb	50
22. Thallium	0.002	1000	2 ppb	0.5
Synthetic Organic Contaminants including Pesticides and Herbicides				
23. 2,4-D	0.07	1000	70 ppb	70
24. 2,4,5-TP [Silvex]	0.05	1000	50 ppb	50
25. Acrylamide	-	-	TT	0
26. Alachlor	0.002	1000	2 ppb	0
27. Atrazine	0.003	1000	3 ppb	3
28. Benzo(a)pyrene [PAH]	0.0002	1,000,000	200 ppt	0
29. Carbofuran	0.04	1000	40 ppb	40
30. Chlordane	0.002	1000	2 ppb	0
31. Dalapon	0.2	1000	200 ppb	200

Table H-1: Converting MCL Compliance Values for CCRs				
Contaminant	**MCL in compliance units (mg/l)**	**multiply by...**	**MCL in CCR units**	**MCLG in CCR units**
32. Di(2-ethylhexyl)adipate	0.4	1000	400 ppb	400
33. Di(2-ethylhexyl) phthalate	0.006	1000	6 ppb	0
34. Dibromochloropropane	0.0002	1,000,000	200 ppt	0
35. Dinoseb	0.007	1000	7 ppb	7
36. Diquat	0.02	1000	20 ppb	20
37. Dioxin [2,3,7,8-TCDD]	0.00000003	1,000,000,000	30 ppq	0
38. Endothall	0.1	1000	100 ppb	100
39. Endrin	0.002	1000	2 ppb	2
40. Epichlorohydrin	-	-	TT	0
41. Ethylene dibromide	0.00005	1,000,000	50 ppt	0
42. Glyphosate	0.7	1000	700 ppb	700
43. Heptachlor	0.0004	1,000,000	400 ppt	0
44. Heptachlor epoxide	0.0002	1,000,000	200 ppt	0
45. Hexachlorobenzene	0.001	1000	1 ppb	0
46. Hexachloro-cyclopentadiene	0.05	1000	50 ppb	50
47. Lindane	0.0002	1,000,000	200 ppt	200
48. Methoxychlor	0.04	1000	40 ppb	40
49. Oxamyl [Vydate]	0.2	1000	200 ppb	200
50. PCBs [Polychlorinated biphenyls]	0.0005	1,000,000	500 ppt	0
51. Pentachlorophenol	0.001	1000	1 ppb	0
52. Picloram	0.5	1000	500 ppb	500
53. Simazine	0.004	1000	4 ppb	4
54. Toxaphene	0.003	1000	3 ppb	0
Volatile Organic Contaminants				
55. Benzene	0.005	1000	5 ppb	0
56. Carbon tetrachloride	0.005	1000	5 ppb	0

Table H-1: Converting MCL Compliance Values for CCRs				
Contaminant	**MCL in compliance units (mg/l)**	**multiply by...**	**MCL in CCR units**	**MCLG in CCR units**
57. Chlorobenzene	0.1	1000	100 ppb	100
58. o-Dichlorobenzene	0.6	1000	600 ppb	600
59. p-Dichlorobenzene	0.075	1000	75 ppb	75
60. 1,2-Dichloroethane	0.005	1000	5 ppb	0
61. 1,1-Dichloroethylene	0.007	1000	7 ppb	7
62. cis-1,2-Dichloroethylene	0.07	1000	70 ppb	70
63. trans-1,2-Dichloroethylene	0.1	1000	100 ppb	100
64. Dichloromethane	0.005	1000	5 ppb	0
65. 1,2-Dichloropropane	0.005	1000	5 ppb	0
66. Ethylbenzene	0.7	1000	700 ppb	700
67. Styrene	0.1	1000	100 ppb	100
68. Tetrachloroethylene	0.005	1000	5 ppb	0
69. 1,2,4-Trichlorobenzene	0.07	1000	70 ppb	70
70. 1,1,1-Trichloroethane	0.2	1000	200 ppb	200
71. 1,1,2-Trichloroethane	0.005	1000	5 ppb	3
72. Trichloroethylene	0.005	1000	5 ppb	0
73. TTHMs [Total trihalomethanes]	0.10	1000	100 ppb	n/a
74. Toluene	1	-	1 ppm	1
75. Vinyl Chloride	0.002	1000	2 ppb	0
76. Xylenes	10	-	10 ppm	10

Table H-2: Regulated Contaminant Information (Appendices B and C to Subpart O of the CCR Rule)

Key

AL=Action Level
MCL=Maximum Contaminant Level
MCLG=Maximum Contaminant Level Goal
MFL=million fibers per liter
mrem/year=millirems per year (a measure of radiation absorbed by the body)
NTU=Nephelometric Turbidity Units
pCi/l=picocuries per liter (a measure of radioactivity)
ppm=parts per million, or milligrams per liter (mg/l)
ppb=parts per billion, or micrograms per liter (g/l)
ppt=parts per trillion, or nanograms per liter
ppq=parts per quadrillion, or picograms per liter
TT=Treatment Technique

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
Microbiological Contaminants				
1. Total Coliform Bacteria	For systems that collect 40 or more samples per month: 5% of monthly samples are positive For systems that collect fewer than 40 samples per month: 1 positive monthly sample	0	Naturally present in the environment.	Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
2. Fecal coliform and *E. coli*	A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or *E. coli* positive	0	Human and animal fecal waste.	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
3. Turbidity	TT	n/a	Soil runoff.	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
Radioactive Contaminants				
4. Beta/photon emitters (mrem/yr)	4	0	Decay of natural and man-made deposits.	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
5. Alpha emitters (pCi/l)	15	0	Erosion of natural deposits.	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
6. Combined radium (pCi/l)	5	0	Erosion of natural deposits.	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
Inorganic Contaminants				
7. Antimony (ppb)	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood glucose levels.
8. Arsenic (ppb)	50	n/a	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
9. Asbestos (MFL)	7	7	Decay of asbestos cement water mains; Erosion of natural deposits.	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
10. Barium (ppm)	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
11. Beryllium (ppb)	4	4	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries.	Some people who drink water containing beryllium in excess of the MCL over many years could develop internal lesions.
12. Cadmium (ppb)	5	5	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints.	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
13. Chromium (ppb)	100	100	Discharge from steel and pulp mills; Erosion of natural deposits.	Some people who drink water containing chromium in excess of the MCL over many years could experience allergic dermatitis.
14. Copper (ppm)	AL=1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
15. Cyanide (ppb)	200	200	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
16. Fluoride (ppm)	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.
17. Lead (ppb)	AL=15	0	Corrosion of household plumbing systems; Erosion of natural deposits.	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
18. Mercury [inorganic] (ppb)	2	2	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland.	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
19. Nitrate [as Nitrogen] (ppm)	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
20. Nitrite [as Nitrogen] (ppm)	1	1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	Infants below the age of 6 months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
21. Selenium (ppb)	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
22. Thallium (ppb)	2	0.5	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories.	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
Synthetic Organic Contaminants including Pesticides and Herbicides				
23. 2,4-D (ppb)	70	70	Runoff from herbicide used on row crops.	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
24. 2,4,5-TP [Silvex](ppb)	50	50	Residue of banned herbicide.	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
25. Acrylamide	TT	0	Added to water during sewage/ wastewater treatment.	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
26. Alachlor (ppb)	2	0	Runoff from herbicide used on row crops.	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, experience anemia, or may have an increased risk of getting cancer.
27. Atrazine (ppb)	3	3	Runoff from herbicide used on row crops.	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
28. Benzo(a)pyrene [PAH] (nanograms/l)	200	0	Leaching from linings of water storage tanks and distribution lines.	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties or may have an increased risk of getting cancer.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
29. Carbofuran (ppb)	40	40	Leaching of soil fumigant used on rice and alfalfa.	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
30. Chlordane (ppb)	2	0	Residue of banned termiticide.	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver, blood, or nervous system, and may have an increased risk of getting cancer.
31. Dalapon (ppb)	200	200	Runoff from herbicide used on rights of way.	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
32. Di(2-ethylhexyl) adipate (ppb)	400	400	Discharge from chemical factories.	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.
33. Di(2-ethylhexyl) phthalate (ppb)	6	0	Discharge from rubber and chemical factories.	Some people who drink water containing di (2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
34. Dibromochloropropane (DBCP) (ppt)	200	0	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive problems and may have an increased risk of getting cancer.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
35. Dinoseb (ppb)	7	7	Runoff from herbicide used on soybeans and vegetables.	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
36. Diquat (ppb)	20	20	Runoff from herbicide use.	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
37. Dioxin [2,3,7,8-TCDD] (ppq)	30	0	Emissions from waste incineration and other combustion; Discharge from chemical factories.	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
38. Endothall (ppb)	100	100	Runoff from herbicide use.	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
39. Endrin (ppb)	2	2	Residue of banned insecticide.	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems. People exposed to high doses of endrin have had nervous system effects and convulsions.
40. Epichlorohydrin	TT	0	Discharge from industrial chemical factories; An impurity of some water treatment chemicals.	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
41. Ethylene dibromide (ppt)	50	0	Discharge from petroleum refineries.	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
42. Glyphosate (ppb)	700	700	Runoff from herbicide use.	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or adverse reproductive effects.
43. Heptachlor (ppt)	400	0	Residue of banned pesticide.	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
44. Heptachlor epoxide (ppt)	200	0	Breakdown of heptachlor.	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
45. Hexachlorobenzene (ppb)	1	0	Discharge from metal refineries and agricultural chemical factories.	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
46. Hexachlorocyclopentadiene (ppb)	50	50	Discharge from chemical factories.	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their stomach or kidneys.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
47. Lindane (ppt)	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens.	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver, and may have an increased risk of getting cancer.
48. Methoxychlor (ppb)	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock.	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
49. Oxamyl [Vydate](ppb)	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes.	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
50. PCBs [Polychlorinated biphenyls] (ppt)	500	0	Runoff from landfills; Discharge of waste chemicals.	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
51. Pentachlorophenol (ppb)	1	0	Discharge from wood preserving factories.	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
52. Picloram (ppb)	500	500	Herbicide runoff.	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
53. Simazine (ppb)	4	4	Herbicide runoff.	Some people who drink water containing simazine in excess of the MCL over many years could experience tremors or have problems with their blood.
54. Toxaphene (ppb)	3	0	Runoff/leaching from insecticide used on cotton and cattle.	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their thyroid, kidneys, or liver and may have an increased risk of getting cancer.
Volatile Organic Contaminants				
55. Benzene (ppb)	5	0	Discharge from factories; Leaching from gas storage tanks and landfills.	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
56. Carbon tetrachloride (ppb)	5	0	Discharge from chemical plants and other industrial activities.	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
57. Chlorobenzene (ppb)	100	100	Discharge from chemical and agricultural chemical factories.	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their kidneys or liver.
58. o-Dichlorobenzene (ppb)	600	600	Discharge from industrial chemical factories.	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
59. p-Dichlorobenzene (ppb)	75	75	Discharge from industrial chemical factories.	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
60. 1,2-Dichloroethane (ppb)	5	0	Discharge from industrial chemical factories.	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
61. 1,1-Dichloroethylene (ppb)	7	7	Discharge from industrial chemical factories.	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
62. cis-1,2-Dichloroethylene (ppb)	70	70	Discharge from industrial chemical factories.	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their immune system.
63. trans-1,2-Dichloroethylene (ppb)	100	100	Discharge from industrial chemical factories.	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver or immune system.
64. Dichloromethane (ppb)	5	0	Discharge from pharmaceutical and chemical factories.	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
65. 1,2-Dichloropropane (ppb)	5	0	Discharge from industrial chemical factories.	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
66. Ethylbenzene (ppb)	700	700	Discharge from petroleum refineries.	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
67. Styrene (ppb)	100	100	Discharge from rubber and plastic factories; Leaching from landfills.	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or blood.
68. Tetrachloroethylene (ppb)	5	0	Discharge from factories and dry cleaners.	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
69. 1,2,4-Trichlorobenzene (ppb)	70	70	Discharge from textile-finishing factories.	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
70. 1,1,1-Trichloroethane (ppb)	200	200	Discharge from metal degreasing sites and other factories.	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
71. 1,1,2-Trichloroethane (ppb)	5	3	Discharge from industrial chemical factories.	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.

Table H-2: Regulated Contaminant Information				
Contaminant (units)	**MCL**	**MCLG**	**Major Sources in Drinking Water**	**Health Effects Language**
72. Trichloroethylene (ppb)	5	0	Discharge from metal degreasing sites and other factories.	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
73. TTHMs [Total trihalomethanes](ppb)	100	n/a	Byproduct of drinking water chlorination.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
74. Toluene (ppm)	1	1	Discharge from petroleum factories.	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
75. Vinyl Chloride (ppb)	2	0	Leaching from PVC piping; Discharge from plastics factories.	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
76. Xylenes (ppm)	10	10	Discharge from petroleum factories; Discharge from chemical factories.	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Table H-3: List of Unregulated and ICR Contaminants

Unregulated Contaminants for which EPA requires monitoring under 40 CFR 141.40

[* = regulations do not require monitoring for these contaminants in all States]

Aldicarb

Aldicarb sulfone

Aldicarb sulfoxide

Aldrin

Bromobenzene

Bromochloromethane*

Bromodichloromethane

Bromoform

Bromomethane (methyl bromide)

Butachlor

sec-Butylbenzene*

n-Butylbenzene*

tert-Butylbenzene*

Carbaryl

Chlorodibromomethane

Chloroethane

Chloroform

Chloromethane

o-Chlorotoluene

p-Chlorotoluene

Dibromomethane

Dicamba

m-Dichlorobenzene

Dichlorofluoromethane*

1,1-Dichloroethane

2,2-Dichloropropane

1,3-Dichloropropane

1,1-Dichloropropene

1,3-Dichloropropene

Dieldrin

Fluorotrichloromethane*

Hexachlorobutadiene*

3-Hydroxycarbofuran

Isopropylbenzene*

p-Isopropyltoluene*

Methomyl

Metolachlor

Metribuzin

Naphthalene*

Propachlor

n-Propylbenzene*

Sulfate

1,1,1,2-Tetrachloroethane

1,1,2,2-Tetrachloroethane

1,2,3-Trichlorobenzene*

1,2,3-Trichloropropane

1,2,4-Trimethylbenzene*

1,3,5-Trimethylbenzene*

ICR Microbial Contaminants (40 CFR 141.142 - 141.143)

- If the following contaminants are found in finished water, suppliers must report them in the CCR detected contaminant table: total coliforms, fecal coliforms or *Escherichia coli, Giardia,* and total culturable viruses.

Note: Any monitoring results (including those to satisfy ICR requirements) indicating the presence of *Cryptosporidium* in either the source or finished water must be displayed outside the detected contaminant table, elsewhere in the report.

ICR Disinfection Byproducts

- If the following contaminants are found in the finished water, suppliers must report them in the CCR:

1. For all treatment plants participating in the ICR monitoring

THM4: Report trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.

HAA5: Report haloacetic acids (mono-, di-, and tri-chloroacetic acid; and mono- and di-bromoacetic acid) as a group.

HAN: Report haloacetonitriles (dichloro-; trichloro-; bromochloro-; and dibromoacetonitrile) as a group.

HK: Report haloketones (1,1-dichloropropanone and 1,1,1-trichloropropanone) as a group.

CP: Chloropicrin.

CH: Chloral hydrate.

TOX: Total organic halides.

Disinfectant residual

2. For treatment plants using Chloramines: -- Cyanogen chloride.

3. For treatment plants using Hypochlorite Solutions: -- Chlorate

4. For treatment plants using Ozone: -- Bromate, Aldehydes

5. For treatment plants using Chlorine Dioxide:

- Chlorine Dioxide residual.
- Chlorite
- Chlorate
- Bromate
- Aldehydes

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Appendix I: Information on Source Water Assessment Programs (SWAPs) and Susceptibility Determinations

Appendix I provides more detailed information on State SWAP programs, wellhead protection programs and other source water information resources. On the following pages, you will find:

- Background information on source water assessments and susceptibility determinations referenced in Section 141.153 (b)(2) of the CCR rule.
- A discussion of CCR rule provisions that require highlighting of source water assessments.
- Examples of how a water system might incorporate the results of source water assessments into a CCR.

Source Water Assessment Program

Background

The 1996 amendments to the Safe Drinking Water Act (SDWA) include a focus on pollution prevention which complements the traditional treatment approach to ensuring safe drinking water. In Section 1453, the amendments require states to develop Source Water Assessment Programs (SWAPs) and submit them for EPA approval in February of 1999. EPA has a nine month period in which to review and approve these programs and then, upon approval, States will have up to three and a half years to complete source water assessments for all public water systems (PWS). These assessments will include delineation of a source water protection area, inventory of potentially significant sources of contamination, and a determination of the susceptibility of the PWS to these potential contamination sources.

As part of an approved program, States must make the results of these assessments available to the public - either directly or through a delegated entity. This last requirement can, in part, be met through the requirements of the CCR rule that water systems provide susceptibility determinations to the public once an assessment has been completed. State source water assessments provide a springboard for local wellhead and watershed protection efforts. Although information about source water protection efforts is not specifically required in CCRs, the reports offer an excellent opportunity for water systems to explain how a community's drinking water supply is being protected.

Program Overview

When assessments conducted under the 1453 Source Water Assessment Program, are complete, States should provide information about the availability of these assessments and a brief summary of the results, i.e. the susceptibility of the system to contamination, for inclusion in the CCR. State personnel responsible for CCR implementation should coordinate closely with the source water program personnel in order to estimate when this assessment information would be available to water systems (This task may require extra effort where the SWAP program is located in another division or agency).

Many states are conducting assessments through local watershed efforts and the ongoing implementation of Wellhead Protection Programs (WHP) that may be used to satisfy or go beyond the SWAP assessment requirements. Wellhead programs may either be voluntary or mandatory for water systems depending on the States' program, but do include development of wellhead management plans. Watershed protection plans are all voluntary. Approximately 4,400 CWS systems nationwide have completed wellhead management plans although many more are in some stage of the process. Most States will be integrating SWAP and WHP activities. One of the key distinctions between the new SWAPs and existing wellhead programs and watershed protection programs is that SWAPs will explicitly include a determination about the susceptibility of the drinking water system to sources of contamination. These determinations will be needed for the purposes of CCR reporting since the CCR rule requires that reports contain a brief summary of the results of these susceptibility determinations.

More information about State SWAP programs, including a list of State source water contacts and links to State source water web sites can be found through http://www.epa.gov/safewater.

Incorporating Source Water Assessment Results in CCRs

Information about source water is an important part of the consumer confidence report. Table I-1 is a list of the report requirements related to source water. Requirements are highlighted in bold and followed by additional information.

Table I-1: CCR Requirements Referencing Source Water Assessment Results

Rule/ Guidance Citation	Requirement
§141.153 (b)(1), §141.153 (d)(5), CCR Guidance: Section I, B.1: Items 2, 5	**Each report must identify the source(s) of water delivered by the CWS by providing information on: the type of water used (i.e. surface water or ground water), the commonly used name (if any) and the location of the body (or bodies) of water.** For surface water, the water body, such as a river, where the intake is located would be appropriate. The name of the watershed or sub-watershed could also be included. For ground water, the name of the principle aquifer would be appropriate. EPA encourages the use of simple maps to illustrate the extent of each system's protection area. A system does not need to report data from every well in it's well field. However, a system using more than one raw water source in independent distribution systems needs to account for each source. Explaining inter-connections and back-up sources will help consumers understand that the source of their water may vary during the year.
§141.153 (b)(2) CCR Guidance: Section I, B.1: Items 2, 5	**If a source water assessment has been completed, the CCR must:** **1) notify consumers that this information is available, and** **2) tell them how to obtain the information** **Where a system has received a source water assessment from the State, the report must include a brief summary of the systems's susceptibility to potential sources of contamination, using language provided by the State or written by the operator.** If an assessment is conducted as part of a State's EPA approved Source Water Assessment Program, a brief summary of the susceptibility determination must be provided in the CCR, in addition to information on availability. As part of an approved program, States must make the results of these assessments available to the public - either directly or through a delegated entity. This often could extend beyond, but can, at minimum, be met in part by having systems provide a summary of the results of susceptibility determination in the CCR. States can either provide this information to the system or, in the case where responsibility for the assessment has been delegated, provide clear guidance on how the results should be presented to the public. Many state programs will produce brief system-specific reports summarizing the results of these assessments which water systems can use for the CCR.

Table I-1: CCR Requirements Referencing Source Water Assessment Results	
Rule/ Guidance Citation	**Requirement**
	If the source water assessment has not been completed, systems could indicate when that information will be available to the public. Systems are encouraged to include information about specific significant sources of contamination in the source water area if they have readily available information from the assessments or other sources such as wellhead management plans, sanitary surveys, watershed assessments, special water quality studies, and other publicly available information.
§141.153 (d)(4)(ix) CCR Guidance: Section I, B.1: Item 4	**Each report must include the likely source(s) of detected contaminants to the best of the operator's knowledge. Specific information regarding the likely source (s) of the contaminants may be available in sanitary surveys and source water assessments and should be used when available to the operator. If the operator lacks specific information on the likely source(s), the report must include one or more typical sources given in the Appendix B of the rule for the detected contaminant. (See Appendix H of this guidance for the list of typical sources).** Even if a source water assessment is not yet complete, the state may have preliminary data about potential contamination sources from state-wide data bases or can provide additional information about the types of potential sources of contamination associated with particular contaminants.
§141.153 (e)(1) CCR Guidance: Section I, B.1: Items 4, 5	**If a system has performed any monitoring, including monitoring to satisfy ICR requirements, which indicate that *Cryptosporidium* may be present in the raw or finished water, the report must include a summary of the results of the monitoring and an explanation of the significance of the results**.
§141.153 (h)(1) CCR Guidance: Section I, B.1: Item 6	**Every CCR must contain a brief explanation about the sources of drinking water and contaminants that may be present in the source water. Systems can either use the language provided in CFR 141.153(h)(1)(i) and (ii) or develop comparable language.**

CCR Examples - Summarizing Results of Source Water Assessments

Most source water assessments will be completed by the year 2003. Many source water assessments will be available before this date. Examples of how results of these assessments could appear in a CCR are given below.

Table I-2: CCR Examples - Source Water Information	
Ground water source ▸ *Source water assessment not available*	Our water comes from three municipal wells drilled 500 feet into an underground source of water called the Low Plains Aquifer. These wells are located west of town on the north side of City Park. The town owns the land immediately around the wells and restricts certain activities on that property. The State will be doing a complete assessment of our source water which will be completed by January 2001. In the 2001 CCR we will summarize the source water assessment results and let you know how to get a copy of the completed assessment and all related information.
Ground water source ▸ *Source water assessment available*	Our water comes from three wells drilled about 500 feet into an underground source of water called the Low Plains Aquifer. These wells are located west of town on the north side of City Park. The wellhead protection area for these wells extends approximately 2000 feet north, 4000 ft south and 1500 ft east and west of the well field. (Please see the map). We have a town ordinance that prohibits dumping and many other activities that could pollute our drinking water in this wellhead area. The Department of Environmental Resources (DER) completed an assessment of our source water in January of 2001 and has reported that our raw water is most susceptible to contamination from abandoned irrigation wells and farm runoff. The town has done a follow-up investigation and has identified two abandoned wells. They have been properly plugged. Farm runoff continues to be a concern. Please contact the County Extension Service at [phone number] to get a list of area farmers participating in a three county source water protection program. You can get a summary of our assessment by calling the DER Region 1 office at [phone number]. A full copy of the assessment is available in the town clerk's office or on the Internet [Internet address].
Groundwater source ▸ *Source water assessment available* ▸ *Contaminants detected*	Our drinking water comes from 5 municipal wells sunk 100 - 175 feet into a shallow unconfined aquifer which extends north of town. Wells 1, 2, & 3 provide all of our water for most of the year. Wells 4 & 5 are only used during water shortage emergencies - usually in late August. In January of 2001, the Pheasantville Waterworks Department conducted a source water assessment with funds provided by the State Source Water Protection Program. The assessment includes a vulnerability ranking - - a prioritized list of the Possible Contaminating Activities (PCAs) identified in the source water assessment. The vulnerability ranking is based on the risk posed by each PCA (relative risk to drinking water supplies), the protection zone in which the PCA occurs, and the Physical Barrier Effectiveness rating (how effective the source and site are at preventing contaminants from reaching the drinking water). Activities at the top of the Pheasantville Vulnerability Ranking include Gas Stations (current and historic), Dry Cleaners, and Leaking Underground Storage Tanks. These activities are known, or believed, to have caused the presence of contaminants in Well 4 (1,2 DCA) and Well 5 (Benzene). Other activities at the top of the Pheasantville Vulnerability Ranking are Chemical Storage, Metal Plating/Finishing, Plastics/Synthetics Producers, Septic Systems on Parcels Less than One Acre, and Sewer Lines.You can get a copy of this assessment, including a map of the source water protection area, by calling the Waterworks Consumer Affairs Department at [phone number] or access it on the Internet at [Internet address].

Table I-2: CCR Examples - Source Water Information	
Surface water ▸ *Source water assessment not available*	Our water is taken from the Grubstake river near Spitfire Junction. We collect water in the McErtel reservoir (Please see the map) and then pipe it to the treatment plant just northwest of town. We restrict access to the reservoir to protect our water from contamination. We are working with the State drinking water program to identify what other kinds of pollution our water supply could be vulnerable to. We will report the results of the source water assessment to you in this report next year. Our Utility is a major sponsor of the Grubstake Watershed Coalition. Please call us at [phone number] to find out how you can get involved.
Surface Water ▸ *Source water assessment available* ▸ *Cryptosporidium detected*	Our utility serves you treated surface water which is taken from the Grubstake river near Spitfire Junction. We collect it in the McErtel Reservoir and then pipe it to the treatment plant just northwest of town. The State drinking water program through a source water assessment report has found that our drinking water is potentially most susceptible to farm runoff as well as three underground storage tanks in Spitfire county. However, we have not detected any contaminants from these sources in our drinking water. You can get a copy of the source water assessment by calling the state drinking water program at [phone number]. In December of 1998, we voluntarily monitored for *Cryptosporidium*, a microbial parasite commonly found in surface water, and found some evidence of these microbes in the raw, but not the finished water. Current test methods do not enable us to determine if these organisms are capable of causing disease. We are not aware of a specific source of *Cryptosporidium*. *Cryptosporidium* may come from wildlife or cattle grazing near the reservoir. *Cryptosporidium* must be ingested for it to cause disease, and may be passed through other means than drinking water. Symptoms of infection include nausea, diarrhea, and abdominal cramps. These symptoms can also be the result of food related organisms or flu or ingesting untreated water. Most healthy individuals are able to overcome the disease within a few weeks. However, some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people living with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk. These people should seek advice from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).
Surface water ▸ *Source water assessment available* ▸ *Cryptosporidium not detected*	Our utility serves you treated surface water which is taken from the Grubstake river near Spitfire Junction. We collect it in the McErtel Reservoir and then pipe it to the treatment plant just northwest of town. The State drinking water program has found that our drinking water is potentially most susceptible to farm runoff and three underground storage tanks in Spitfire county. However, we have not detected any contaminants from these sources in our drinking water. You can get a copy of this state information by calling the state drinking water program at [phone number].

Table I-2: CCR Examples - Source Water Information	
Surface Water ▸ *Source water assessment not available* ▸ *Known potential source of contamination*	Your water is taken from the Grubstake river near Spitfire Junction. The Grubstake river is part of the Fuller Watershed . We collect the water in the McErtel Reservoir and then pipe it to the treatment plant just northwest of town. We have established an emergency plan to deal with the potential of industrial accidents contaminating our source. We have worked with the Spitfire Finishing Plant to minimize the likelihood of contamination. The State Drinking Water program is doing source water assessments for all communities and should have results for our community available by January 2001. Please call us at [phone number] if you would like more information about this assessment.

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Appendix J CCR Compliance Strategy

The CCR compliance strategy, developed with participation from EPA Regions, outlines actions EPA Regions should take to address CCR rule noncompliance during the first year of CCR rule implementation. This strategy establishes expectations for compliance and enforcement activities under the CCR rule, since no significant noncomplier (SNC) definition has been developed for the rule.

The CCR compliance strategy emphasizes compliance assistance and outreach to minimize rates of noncompliance as well as the use of model materials to provide consistent and graduated enforcement responses for the first year. Based upon an evaluation of the rates and types of noncompliance, EPA in consultation with primacy States will adjust this strategy for the following years.

MEMORANDUM

SUBJECT: First Year Consumer Confidence Report (CCR) Rule Compliance Strategy

FROM: Eric V. Schaeffer, Director
Office of Regulatory Enforcement

Cynthia C. Dougherty, Director
Office of Groundwater and Drinking Water

Elaine G. Stanley, Director
Office of Compliance

TO: Water Division Directors, Regions I-X
Enforcement Division Directors Regions I, II, VI, and VIII
Region Counsels, Regions I-X

The first deadline in the Consumer Confidence Report (CCR) Rule, October 19, 1999, is fast approaching. This is an important new Public Right to Know rule mandated by the 1996 Safe Drinking Water Act Amendments requiring several first-time activities for all community water systems. To address many of the new start-up requirements and initial implementation activities, we are issuing a first-year compliance strategy emphasizing compliance assistance and outreach, and model materials. Beginning late next spring and following an evaluation of rates and types of noncompliance problems, we will adjust this strategy, working with primacy states, for the following years. The major components of the strategy include:

- Distribution of informational materials to all community water systems;
- Mailing of noncompliance/show cause letters to all water systems which our data base indicates have not prepared a CCR;
- Evaluation of type and root causes of noncompliance;
- Issuance of administrative orders for a targeted subset of noncompliers and appropriate press releases prior to the July 1, 2000 deadline for the subsequent CCR.

This compliance strategy reflects a great deal of hard work by you and your staff. As you are aware, the strategy was developed with Regional participation and reviewed by a steering committee composed of senior managers from Region I, IV, and IX and from the Office of Groundwater and Drinking Water and Office of Regulatory Enforcement. The strategy sets out clear first year expectations for compliance and enforcement activities under the CCR rule. The purpose of the CCR Compliance Strategy is to provide consistent and graduated enforcement responses using model compliance and enforcement tools. The strategy is designed to be implemented by EPA Regions in all States; however, where EPA Regions and the States have negotiated implementation agreements for this regulation, States may have the lead and may take more stringent actions consistent with their authorities. In addition, if a State obtains primary enforcement responsibility for the CCR during this first year, the Regions, as part of the primacy process, will negotiate with the State an appropriate escalating compliance strategy consistent with this national strategy.

To comply with the CCR rule, all community water systems must prepare a Consumer Confidence Report and deliver the report to their customers, the State primacy agency, and any other agency designated by the State primacy agency. The water systems must also send to the State a certification (within three months of the required CCR delivery date) that the system has distributed the report and used correct information. The first report is due by October 19, 1999 and subsequent reports by July 1, each year thereafter. Certifications must be sent to the State by January 19, 2000 for the first report and by October 1, annually for subsequent reports. A summary of the key dates in the compliance strategy is attached for your reference.

Compliance assistance and enforcement of the CCR rule are imperative to ensure implementation of this important Public Right to Know regulation. This compliance strategy will continue the current momentum Regions and States have obtained in their current compliance assistance efforts. We thank you for all of the Regional effort taken to develop this national strategy. Please contact Richard Alonso in the Water Enforcement Division, ORE, at (202)564-6048 if you have any questions.

Attachment

cc: Drinking Water Branch Chiefs
Public Water Systems Enforcement Coordinators
Public Water Systems Regional Attorneys
OECA Enforcement Coordinators

Key Dates in the First Year
Consumer Confidence Report (CCR) Rule Compliance Strategy

By October 19, 1999	Community Water Systems (CWSs) prepare and deliver the Consumer Confidence Report to their customers, the State primacy agency, and any other agency designated by the State primacy agency
By January 19, 2000	CWSs send certification to State that the system has delivered the report and used the correct information.
By April 1, 2000	Regions (or States where the State has agreed to perform this task) distribute noncompliance or show cause letters to CWSs which according to records have not prepared or distributed the CCR.
By May 31, 2000	Regions identify water systems which should receive federal administrative orders for not preparing the CCR. Headquarters conducts analysis of noncompliance with the CCR.
Prior to July 1, 2000	Decision made on national or Regional press releases outlining compliance with and enforcement activities for the CCR.
By July 1, 2000	CWSs prepare second CCR and distribute it to their customers, the State primacy agency, and any other agency designated by the State primacy agency.

Consumer Confidence Report (CCR) Rule Compliance Strategy

Introduction

To comply with the Consumer Confidence Report (CCR) rule, all community water systems must prepare a CCR and deliver the report to their customers, the State primacy agency, and any other agency the primacy agency designates. The water system must also send to the State a certification (within three months of the required CCR delivery date) that the system has distributed the report and used correct information in it. The first report is due by October 19, 1999 and subsequent reports by July 1, each year thereafter. Certifications must be sent to the State by January 19, 2000 for the first report and by October 1, annually for subsequent reports.

The purpose of the CCR Compliance Strategy is to provide an outline of compliance assistance tools and responses to noncompliance. The strategy is intended to be clear and simple and is to be implemented by EPA Regions in all States. However, where EPA Regions and the States have negotiated implementation agreements for this regulation, States may have the lead and may take more stringent actions consistent with their authorities. In addition, if a State obtains primary enforcement responsibility for the CCR during this first year, the Regions, as part of the primacy process, will negotiate with the State an appropriate escalating compliance strategy consistent with this national strategy. In general, EPA action will not be necessary where a State takes appropriate action consistent with the CCR Compliance Strategy.

Outreach/Education and Compliance Assistance

EPA Headquarters and Regions have developed several implementation aids and compliance assistance tools to assist EPA Regions, States, and community water systems with implementation of the CCR rule. One of the centerpieces of the compliance assistance tools for public water systems is a plain-English manual on rule requirements and on preparation of CCRs. The manual was developed by the Office of Groundwater and Drinking Water (OGWDW) and is entitled *Preparing Your Drinking Water Consumer Confidence Report.* The manual is available on the Internet and is being distributed directly to public water systems throughout the country. In addition, the Agency developed the *CCR Writer,* an electronic template to help systems prepare their CCRs, which is also available on the Internet.

It is expected that every system will be sent consistent compliance materials by either EPA Regions or by the States in accord with State-EPA Implementation agreements. The Office of Enforcement and Compliance Assurance (OECA) is providing a simple plain English compliance brochure that discusses the rule, reporting obligations, and deadlines. This brochure is folded and franked, requiring only a label for mailing. The brochure will be distributed in August 1999 to Regions to assist their continuing outreach and education efforts. The goal of the brochure is to ensure proper and consistent fair notice to the regulated community of the new CCR requirements. In those cases where systems have *not* been notified of the CCR rule requirements by either EPA or

the State, Regions (or States where the State has agreed to perform this task through a State-EPA Implementation Agreement) should forward this brochure to systems to ensure proper notice.

OECA will also place CCR materials in the Local Government Environmental Assistance Network (LGEAN). LGEAN is a compliance assistance center established by OECA to assist local governments with regulatory and technical issues. LGEAN can be reached by either the Internet (www.lgean.org) or its toll-free telephone number (1-877-TO LGEAN). The Regions are encouraged to use LGEAN as a tool for providing compliance assistance and outreach. Upon request, OECA will provide the Regions with material on LGEAN that may be distributed to the water systems. Finally, OECA will place CCR materials on other appropriate web sites of pre-identified associations/organizations.

The lengthier *CCR State Implementation Guidance*, prepared by OGWDW, provides States and Regions with information on rule requirements, reporting violations, and primacy revision applications. EPA Headquarters also developed and delivered CCR training workshops for Regions and States. EPA is also preparing public service announcements and other outreach materials to inform consumers about CCRs.

These outreach efforts and tools will supplement a variety of efforts performed by the Regions. Most Regions have provided training on the rule for their States, as well as worked in partnership with the States to provide training to water systems. Some Regions have provided training directly to public water system operators. Regions also worked with a number of outside organizations to prepare templates and outreach materials such as CCR fact sheets, articles, and brochures. In light of all of these efforts and compliance assistance tools, the Agency expects that all community water systems will have proper and adequate notice of the new regulatory requirements before the first CCR is due on October 19, 1999.

Noncompliance (Show Cause) Letters

EPA anticipates receiving from the States in February 2000, lists of all systems that prepared a CCR and delivered it appropriately in October. To verify completeness and accuracy of the lists and to capture any late reporting information, at a minimum, the Regions (or States where the State has agreed to perform this task) will mail noncompliance or show cause letters to the drinking water systems for which there is no record of a CCR submission. These letters should be distributed to systems before April 1, 2000. To aid the Regions, OECA will develop a model letter for Regions to mail to systems where our information indicates that the system did not prepare the CCR. The letter will (1) state that EPA records show the system did not prepare a CCR, (2) explain the regulatory requirements and their importance, (3) explain that failure to report can result in an enforcement action, including penalties for failure to comply with the enforcement action, and (4) notify the system of the July 1, 2000 deadline for the subsequent report. In cases where States have agreed through State-EPA Implementation Agreements to send out similar show cause letters, the Regions will not be required to send the noncompliance letters. Instead, Regions should forward the model letter to the States to provide an example of the minimum content that a noncompliance letter should contain. Regions and States may tailor the model letter to the local situation. In addition,

as noted earlier, if a State obtains primary enforcement responsibility during this first year, the Region will work with the State to develop the State compliance strategy consistent with this national strategy.

If EPA is enforcing against or investigating a particular water system for violations unrelated to the CCR and EPA has information that the system did not prepare a CCR as required by the regulations, then the violation of the CCR can be added to the enforcement case without first issuing the noncompliance letter. Regional staff should consult Richard Alonso in ORE-Water Enforcement Division for additional assistance on these issues.

Based on levels of compliance, EPA may issue national and/or regional press releases as necessary to identify and publicize systems that did not prepare a report after receiving the noncompliance letters. Such publicity often motivates systems to return to compliance. Further, the press releases will serve to remind systems of the deadline for the second report.

After analysis of the noncompliance data associated with the first report, OECA will consider listing, in future Annual Compliance Reports, the public water systems that did not prepare a CCR. Alternatively, the Annual Compliance Reports may provide a percentage of systems in noncompliance with the CCR regulations for each State.

Formal Enforcement Action for Non-Compliance

Before the end of May 2000, Regions will identify water systems that will receive federal Administrative Orders (AOs). While the Agency is stressing compliance assistance for the first CCR, the Regions are encouraged to issue AOs within the first year to address egregious cases and for other reasons to ensure that CCRs are taken seriously by water systems. Taking Regional resources into consideration, system size and/or compliance history can be used to determine whether an AO should be issued for failure to do a CCR. OECA will develop a model Administrative Order for CCR violations to aid enforcement personnel and maximize resources in the CCR enforcement process. For the first report deadline, we expect all federal enforcement to be preceded by the show cause letters. Federal enforcement does *not* need to be preceded by a noncompliance letter for missing a subsequent report deadline. However, in cases where a State has interim primacy for the CCR rule, EPA will need to issue a Notice of Violation to the State and the system as required under SDWA Section 1414. The show cause letter can serve as the notice to a State under SDWA 1414. In cases where a State has agreed to issue AOs and compliance data is reviewed for accuracy and reliability, a State would not have to issue a noncompliance letter before issuing an AO. At a minimum, all systems not receiving AOs the first year will be considered priority for AOs the second year, especially if they do not meet the second year deadline.

Compliance Analysis

In the Spring of 2000, OECA will conduct an analysis of noncompliance, outlining categories of noncompliance with the CCR. The purpose of the analysis will be to focus and target continuing

outreach, compliance assistance, and enforcement to reduce noncompliance among systems in a given category. Categories may include large systems, small systems, rural communities, or significant noncompliance (SNC) status.

Based on levels of compliance and enforcement activities, EPA will consider issuing a national and/or regional press releases outlining Federal enforcement activities of the CCR prior to the second year reporting deadline of July 1, 2000.

Report Quality

During the first years of implementation of this rule, EPA intends for the focus to be on whether a community water system prepared an educational CCR and distributed it in accordance with the rule. Several resources such as templates and guidance provided by EPA, as well as templates and materials developed by other organizations, are available to help systems produce the report. Therefore, EPA expects that most of the reports will adequately meet the report content requirements under the rule.

EPA believes that States should make a good faith effort to check the quality of some reports. EPA recognizes that States and Regions have limited resources and will wish to prioritize the allocation of resources in reviewing the quality of CCRs. This area may become a focused priority in future years. Regions and States should have agreed upon a plan for review and specified the level of detail of those quality checks in the State-EPA Implementation Agreement. Review procedures could be based on criteria such as population served, SNC status, or violation history. States may wish to prioritize water systems and take special care to ensure that those considered high priority, such as the largest systems in the State or systems with a record of noncompliance, issue CCRs completely, accurately, and on-time.

Conclusion

This compliance strategy will continue the current momentum Regions and States have obtained in their current compliance assistance efforts and will help ensure successful implementation of the CCR rule. EPA will revisit this strategy after the first year and address such issues as late reporting and data quality responses. Please contact Richard Alonso, ORE-Water Enforcement Division (202/564-6048) if you have any questions on this strategy.

Appendix K Memorandum on Alternative MCL Reporting Format

EPA believes the format requirement specified in 40 CFR 141.153(d)(4)(i) that the MCL be reported as a number greater than or equal to one can be changed only in very limited circumstances. This appendix contains a memorandum dated June 29, 1999 that clarifies what those conditions are and the specific criteria under which those conditions may be met.

MEMORANDUM

Subject: Consumer Confidence Report (CCR) Rule -- Units for Reporting Detected Contaminants

To: Water Division Directors
Regions I - X

From: Cynthia Dougherty, Director
Office of Ground Water and Drinking Water

I am writing to reaffirm our policy on reporting units for detected contaminants in Consumer Confidence Reports (CCRs). The CCR rule requires water systems to list detected contaminants and to show corresponding Maximum Contaminant Levels (MCLs) and the level detected. The MCL must be expressed as a number greater than or equal to one and the level detected must be expressed in the same units.

Some states contend that CCRs should be prepared with the units most commonly used by water systems. States argue that using these units would limit the effort required to prepare reports and minimize errors. However, we believe that the effort to convert units is well spent. Focus groups conducted independently by EPA and the American Water Works Association showed that the public finds numbers greater than or equal to one easier to understand and use as a basis for comparing with detected levels. I believe that templates produced by EPA and other organizations that automatically convert data will make reporting in numbers greater than or equal to one less difficult for water systems.

At the Association of State Drinking Water Administrators (ASDWA) Winter Meeting, I was asked about the type of information and research that would be required before EPA would approve a CCR Rule primacy revision application that allowed MCL reporting in other than numbers greater than or equal to one. I responded that I would consider approval of such an application upon a good faith State effort showing the proposed reporting format is favored by the State's public over using numbers greater than or equal to one. I believe that there should be a high bar for public involvement for changing the reporting format for detected contaminants. Public involvement should include documented focus group research. This research should target members of communities served. Representatives from water systems and other drinking water professionals can be involved in the research, but they should not be considered the target audience. If the process shows that consumers find an alternative MCL format easier to understand, I would consider approving a State primacy revision application including that format. Thus far no State has tried to make this demonstration.

I strongly recommend that States include their EPA region and a wide range of stakeholders in developing any focus group methodology. If a State intends to change the MCL presentation format, I recommend that the State submit a draft primacy revision application documenting the methodology and the focus group research and explaining the proposed changes.

All focus group research conducted to date that we are aware of shows that numbers greater than or equal to one for presentation of MCLs are easiest for consumers to understand. Please call me with any questions or comments at (202)-260-5543 or have your staff call Kathy Williams at (202)-260-2589.

cc: CCR Implementation Workgroup
Vanessa Leiby, ASDWA

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Appendix L Additional Resources Available to Prepare CCRs

In addition to this State implementation guidance, EPA has developed other implementation aids to help States and systems comply with the CCR regulation.

A computerized "fill-in-the blank" template that CWSs may use to create a plain but effective CCR.

A "how to" manual for water suppliers on preparing CCRs.

The Safe Drinking Water Hotline (800-426-4791) is a resource for health related questions and water quality issues.

Additional information on the CCR and related topics can be found on the EPA website: http://www.epa.gov/safewater/ccr1/html.

States

Many State drinking water agencies are conducting training workshops and developing outreach materials for systems on the CCR. Some States are providing monitoring data and developing their own templates to help systems create more useful CCRs.

Other Organizations

Several organizations are preparing resources such as electronic templates, handbooks, and training seminars to help CWSs prepare CCRs.

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